

Tuesday, January 03, 2017 3:26:11 PM

Item ID: 647.4112

Accept

N900040100

Setup Start *NS1*

Revision ID:

Stop *NS2*

Item Name: Clip

Start Date: 1/6/2017 **Start Qty:** 8.00

g

Cust Item ID:

Required Date: 1/13/2017 **Req'd Qty:** 8.00

8

Customer:

Reference:

DAS

21

9-89

Approvals: Process Plan: 3-89 Date: JAN 04 2017

Tooling:

Date:

Run Start *NR1*

QC: _____

Date: _____

SPC (Y/N):

Date:

Stop *NR2*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
Draw Nbr	Revision Nbr								
647.4100	n/c								

110

0.02

1 10

Waterjet

FLOW CNC Waterjet

Memo

1-Cut as per Dwg

Dwg Rev: 2/6

Prog Rev: N/C

2-Deburr if necessary

0.01

120

0.00

120

QC

Quality Control

QC2- Inspect parts off machine FAI/FAIB

Memo

0.01

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval		
Description Work Order Deviation				Disposition					
Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐		FAULT CATEGORY Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Mislabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐							
		OTHER : ☐							

DQA: _____ Date: _____



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QA Closed: _____ Date: _____

Work Order update only ☐

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Work Order ID 154921

Tuesday, January 03, 2017 3:26:11 PM

154921

Page 3

Item ID: 647.4112 Accept ***N900040100*** Setup Start ***NS1***
Revision ID: Stop ***NS2***
Item Name: Clip
Start Date: 1/6/2017 Start Qty: 8.00 ***8*** Cust Item ID:
Required Date: 1/13/2017 Req'd Qty: 8.00 ***8*** Customer:
Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____ Run Start ***NR1***
QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
160 *160* Outsource4 Outsource process - Anodize	Outsource process-Anodize per QSI017 4.1.10.1 Memo Issue P/O to ATG : <u>35239</u> 1- Black Anodize as per Dwg 647.4100 2- PRIME AS PER DWG, SEE NOTE #2 Certification of Comformity is required	0.00 239.99				<u>8</u>	<u>FEB 08 2017</u>		DAS 13 9-89
170 *170* Packaging Packaging	Receive & Inspect for Damage & Mat'l Certs Memo	0.00 0.03				<u>8x</u>	<u>SP17-02-21</u>		
180 *180* QC Quality Control	QC5- Inspect part completeness to step on W/O Memo	0.00 0.03				<u>8</u>			DAS 38 9-89 FEB 22 2017

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS <table style="width:100%; border: none;"> <tr> <td style="border: none;">Skid-tube ☐</td> <td style="border: none;">Cross tube ☐</td> <td style="border: none;">Water Jet ☐</td> <td style="border: none;">Engineering ☐</td> </tr> <tr> <td style="border: none;">Machining ☐</td> <td style="border: none;">Small Fab ☐</td> <td style="border: none;">Prod. Eng. Coord. ☐</td> <td style="border: none;">Quality ☐</td> </tr> <tr> <td style="border: none;">Thermoforming ☐</td> <td style="border: none;">Finishing ☐</td> <td style="border: none;">Rec/Store/Packaging ☐</td> <td style="border: none;">Other ☐</td> </tr> <tr> <td style="border: none;">Large Fab ☐</td> <td style="border: none;">Composite ☐</td> <td style="border: none;">Supplier ☐</td> <td></td> </tr> </table>						Skid-tube ☐	Cross tube ☐	Water Jet ☐	Engineering ☐	Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐	Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐	Large Fab ☐	Composite ☐	Supplier ☐	
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Work Order ID 154921

Tuesday, January 03, 2017 3:26:11 PM

154921

Page 4

Item ID: 647.4112

Accept

N900040100

Setup Start

NS1

Revision ID:

Stop

NS2

Item Name: Clip

Start Date: 1/6/2017 Start Qty: 8.00

8

Cust Item ID:

Required Date: 1/13/2017 Req'd Qty: 8.00

8

Customer:

Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Run Start

NR1

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop

NR2

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
--------------------------------	--------------------------	----------------------	---------	--------	--------------	---------------	---------------	------------------	----------------

210

Identify as per dwg & Stock Location: CCK162

0.00

210

Packaging

Memo

0.01

Packaging

IDENTIFY AS PER APICAL MPP-120 BY STAMPING P# AND REV

8DAS
6
9-89FEB 23 2017

220

QC21- Final Inspection - Work Order Release

0.00

220

QC

Memo

0.13

Quality Control

17/2/23 DADAS
21
9-89FEB 23 2017

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

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Work Order update only ☐

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OTHER : _____					

Picklist Print

Tuesday, January 03, 2017 3:26:11 PM

Page 1

Work Order ID: 154921

154921

Parent Item: 647.4112

647 4112

Parent Item Name: Clip

Start Date: 1/6/2017

Required Date: 1/13/2017

Start Qty: 8.00

Required Qty: 8.00

Comments: IPP REV:A 12.10.26 NEW ISSUE DD VERF:JLM

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
M2024T3S.070		Purchased	No			110	sf	27.1000	0.13	1.094737			

M2024T3S 070

2024-T3 .070 sheet

01/17/20

Location

Loc Qty

Loc Code

MAT022

27.1

m130387

27.1

1

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

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Work Order update only ☐

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OTHER : _____					

APICAL

INDUSTRIES, INC.

ENGINEERING CHANGE NOTICE NL 04510

SHEET 1 OF 1

DWG NO. 647.4100

REV: N/C

PREPARED BY: J. BECKER

DATE: 04/24/14

EFFECT ON DWG
☐ INC. ☒ UNINC.

DWG TITLE: SHEETMETAL

APPROVED BY: ENGR

MFG

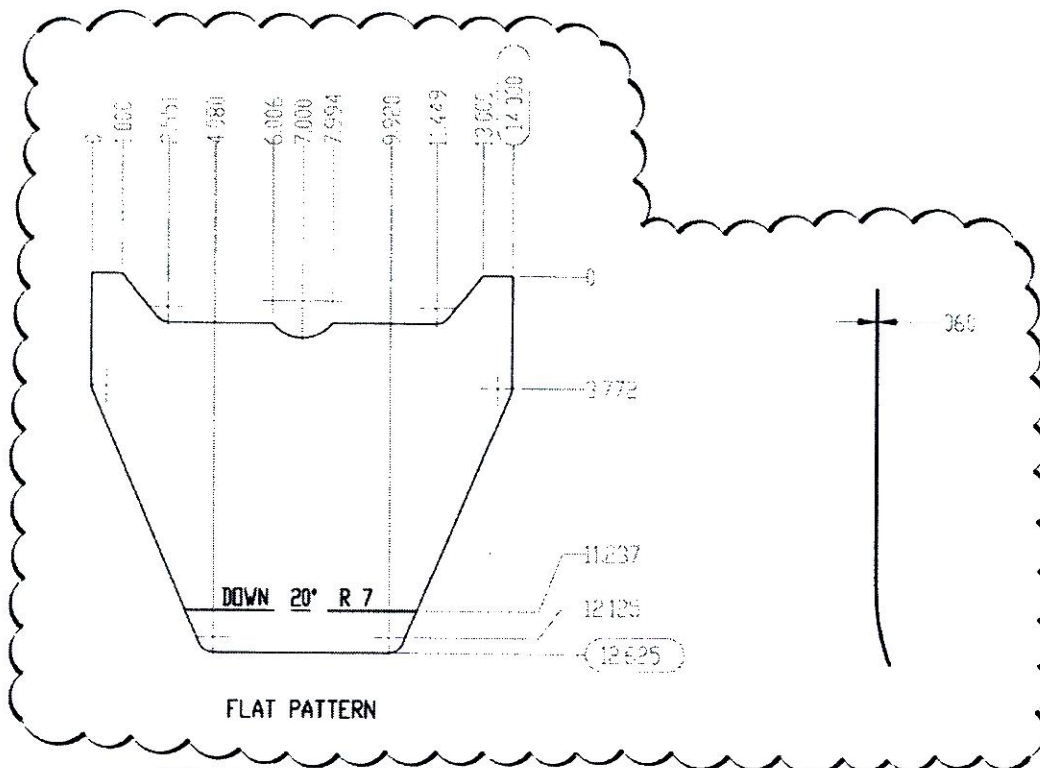
QC

EFF:

NEXT ORDER

TRANSACTION CODES (TC):
A-ADD C-CREATE
R-REVISE D-DELETE

REASON: MODIFIED DOUBLER.



SHEET 1, ZONE C2 IS:

SHOP COPY
RETURN TO
ENGINEERING
UNCONTROLLED COPY
SUBJECT TO AMENDMENT

WITHOUT NOTICE
WORK ORDER
NO. 154921 MLJ

17-01-04

DOCUMENTS EFFECTED:

☐ MDL ☐ INSTALL INSTRU ☐ ICA ☐ BOM

CHANGE CATEGORY
☐ MAJOR ☒ MINOR

DER REVIEW REQUIRED
☐ YES ☒ NO

APICAL INDUSTRIES, INC.	ENGINEERING CHANGE NOTICE NO. 02866				SHEET 1 OF 1	
	DWG NO. 647.4100	REV: N/C	PREPARED BY R. ROSANO	DATE: 05/05/10	EFFECT ON DWG ☐ INC. ☒ UNINC.	
	DWG TITLE: SHEET METAL					
	APPROVED BY: ENGR <i>[Signature]</i>	MFG <i>[Signature]</i>	QC <i>[Signature]</i>	EFF: CURRENT ORDER		
TRANSACTION CODES (TC): A-ADD C-CREATE R-REVISE D-DELETE	REASON: CHANGED PRETREATMENT CALLOUT					

SHEET 1, ZONE A1 IS:

UNLESS OTHERWISE SPECIFIED

△ MATERIAL: ALUMINUM 2024-T3 PER AMS-HQ-A-250/4

△ FINISH: HARD ANODIZE JAW MDL A 80P5 TYPE II

PRETREAT 2024-8 ADHESION PROMOTER
JAW MDL A 80P5 TYPE II

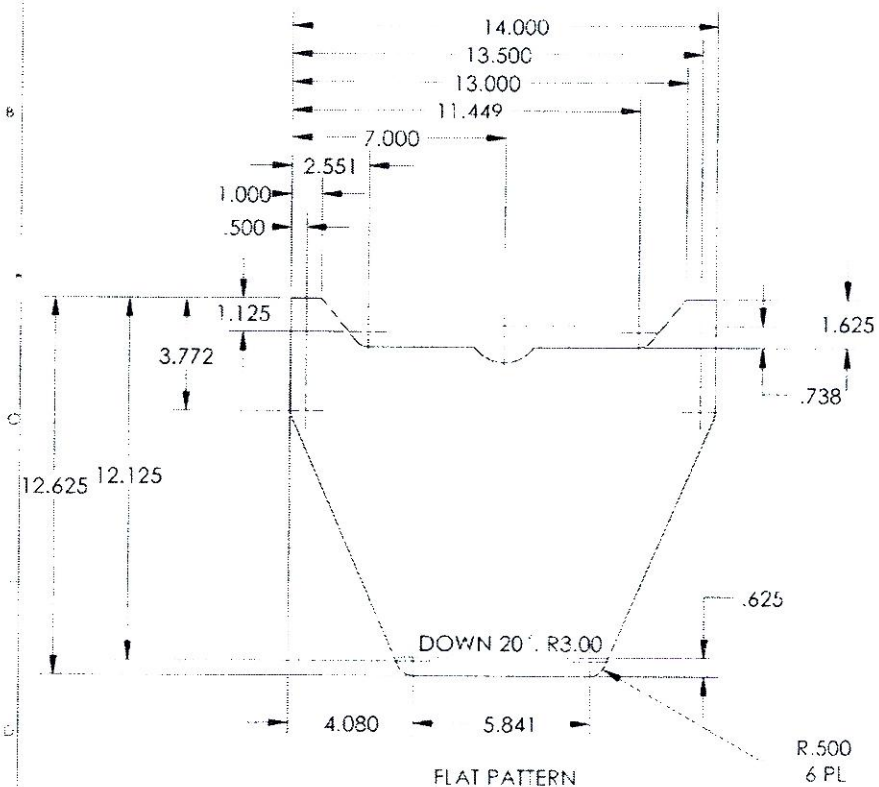
IS

3 DEBURR AND BREAK ALL SHARP EDGES

4 IDENTIFY JAW MP9-120

F/N	TC	PART NUMBER	QTY	DESCRIPTION	MATERIAL	SPECIFICATION
DOCUMENTS EFFECTED:				☐ MDL ☐ INSTALL INSTRU ☐ ICA ☐ BOM	CHANGE CATEGORY ☐ MAJOR ☒ MINOR	DER REVIEW REQUIRED ☐ YES ☒ NO

4. IDENTIFY IAW MPP-120



.060

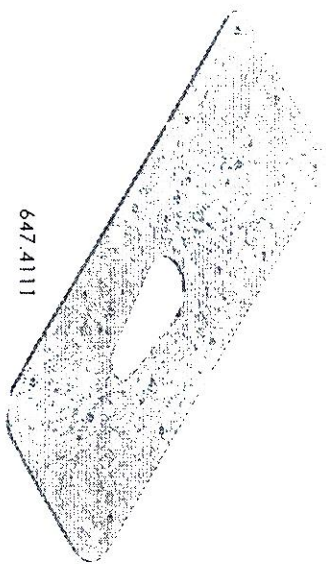
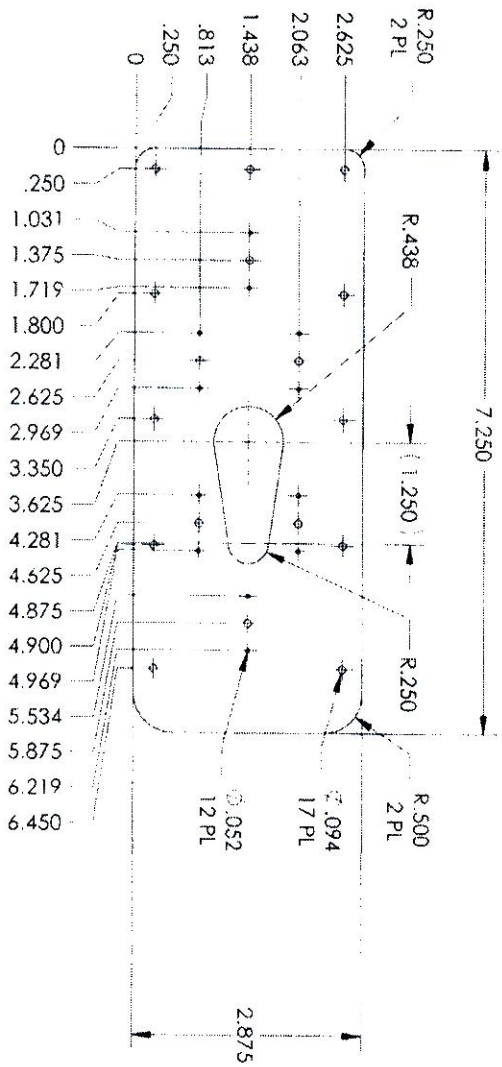
647.4110

UNINCORPORATED ECN(S)

02966, 04510

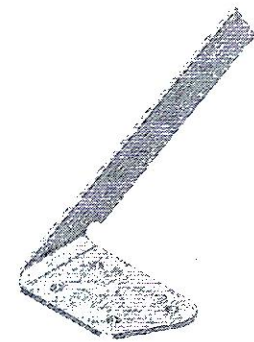
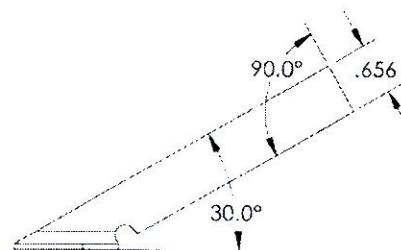
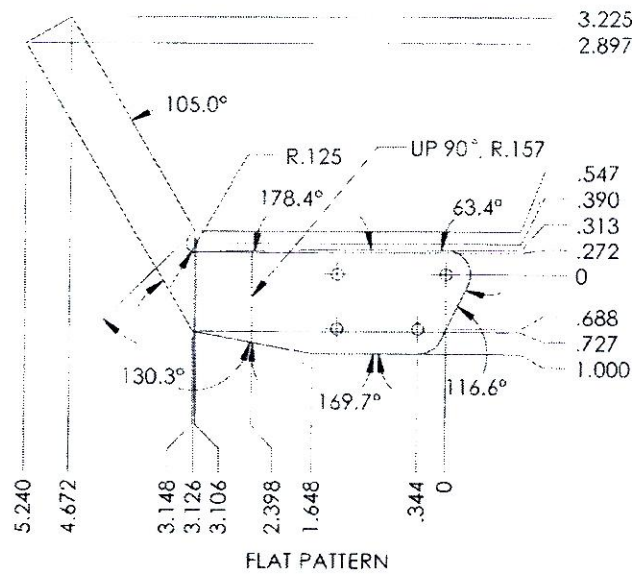
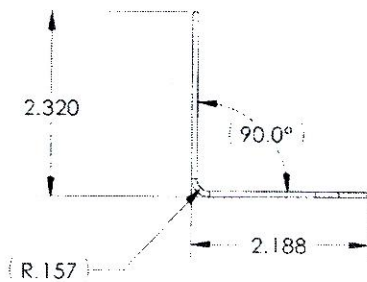
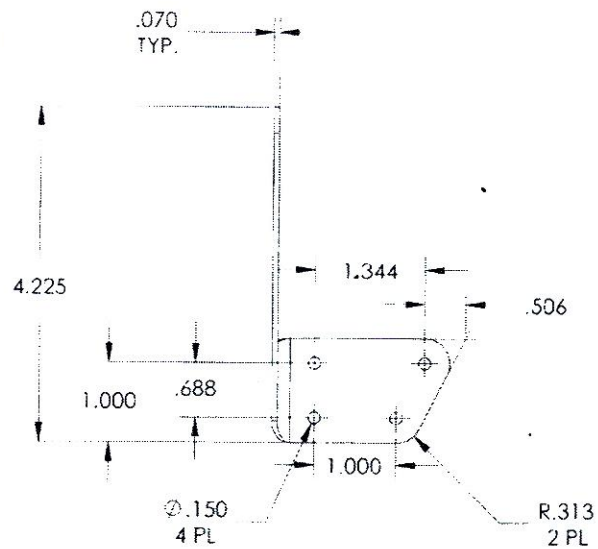
[illegible]

.040
TYP.



647.4111

APICAL INDUSTRIES	
SHEETMETAL	
647.4100	



647.4113 SHOWN
647.4112 OPPOSITE

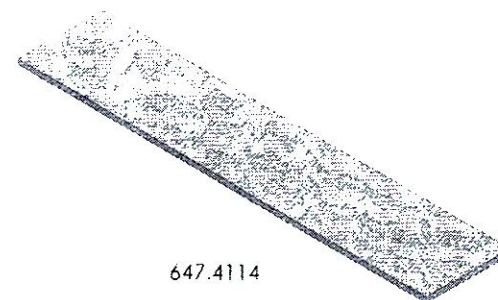
APICAL INDUSTRIES	
2600 TEMPLE HITCHCOCK DR. DOLANVILLE, PA 17033-2501 (717) 324-5900	
SHEETMETAL	
647.4100	

.063



4.80

.984



647.4114

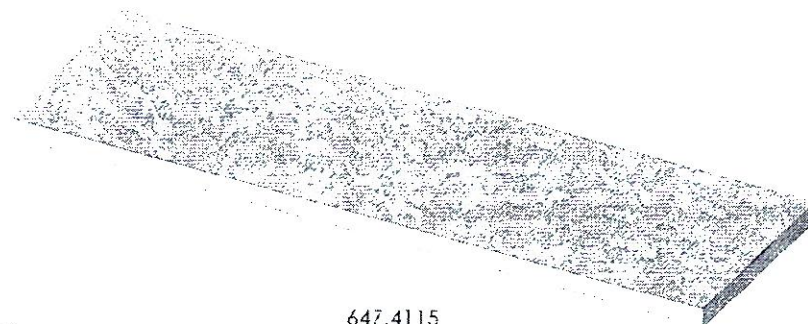
APICAL INDUSTRIES

100 TEMPLE HEIGHTS DR
OAKLAND, CA 94612-2512 (916) 431-0500

SHEETMETAL

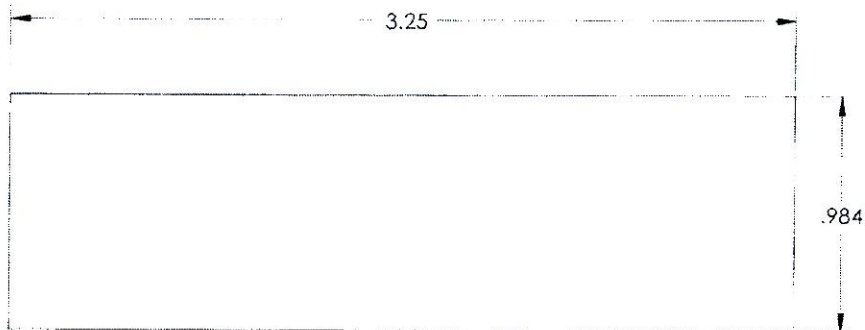
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.090



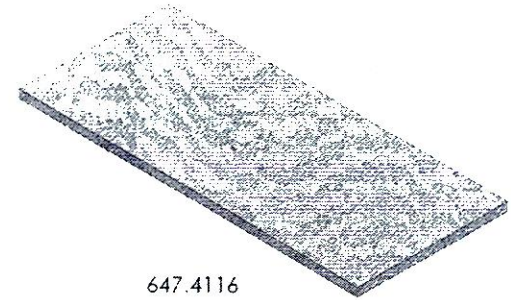
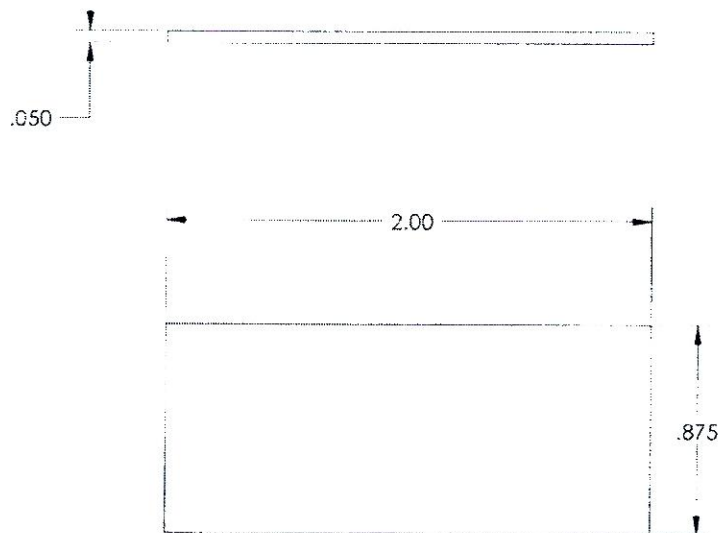
647.4115

3.25



.984

APICAL INDUSTRIES	
2604 TEMPLE HERMIT DR.	
OCEANSIDE, CA 92056-3312 (760) 724-1100	
SHEETMETAL	
647.4100	



647.4116

PART NUMBER 647.4116 QUANTITY 1 DATE 10/1/00	APICAL INDUSTRIES 7615 TEMPLE HEIGHTS DR. OCEANVIEW, CA 94053-0010
DRAWN BY J. J. JONES CHECKED BY J. J. JONES	SHEETMETAL 647.4100



Dart Aerospace Ltd.
1270 Aberdeen Street
Hawkesbury, ON K6A 1K7
Tel: 613 632 9577
Fax: 613 632 1053

PURCHASE ORDER

Purchase Order ID PO35239

Purchase Order Date 2/8/2017

PO Print Date 2/8/2017

Page Number 4 of 6

Order From : VC-ATG001

A.T.G. INDUSTRIES INC.
731 INDUSTRIELLE ROAD
ROCKLAND, ON K4K 1T2
CANADA

Ship To : DART AEROSPACE LTD
1270 ABERDEEN
HAWKESBURY, ON K6A 1K7
CANADA

Contact Name
Vendor Phone 613-446-4544

Ship To Contact
Ship To Phone
Ship Via: VENDOR'S TRUCK
Ship Acct:

Buyer Chantal Lavoie
Customer POID
Customer Tax # 10127-2607
Terms Net 30
Currency CAD
FOB FCA - (Free Carrier)

Line Total: \$117.50

10	154910	647.4110 DOUBLER REV. N/C	2/24/2017	5.00	\$23.25	\$116.25
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Yes
2/24/2017

FINISH: HARD BLACK ANODIZE AS PER IAW MIL-A-8625 TYPE III, CLASS 2 / PRIME AS PER IAW MIL-PRF-23377K TYPE I CLASS N

Line Total: \$116.25

11	154921	DAS 38 7-89 647.4112 CLIP REV. N/C	2/24/2017	8.00	\$7.00	\$56.00
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Yes
2/24/2017

FINISH: HARD BLACK ANODIZE AS PER IAW MIL-A-8625 TYPE III, CLASS 2 / PRIME AS PER IAW MIL-PRF-23377K TYPE I CLASS N

Line Total: \$56.00

12	154922	647.4113 CLIP REV. N/C	2/24/2017	8.00	\$7.00	\$56.00
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Yes
2/24/2017

FINISH: HARD BLACK ANODIZE AS PER IAW MIL-A-8625 TYPE III, CLASS 2 / PRIME AS PER IAW MIL-PRF-23377K TYPE I CLASS N

Line Total: \$56.00

PO Instructions: PRIMER IS SUPPLIED BY DART

Note:

2/8/2017



A.T.G. INDUSTRIES INC.
731 INDUSTRIELLE STREET
ROCKLAND, ON K4K 1T2
Canada

Ph: (613) 446-4544

Fax: (613) 446-4556

Pack List

Number: 912955

Date: 21-Feb-17

To

Dart Aerospace Ltd
1270 Aberdeen St
Hawkesbury, ON K6A 1K7

Ship To

CHANTAL LAVOIE
Dart Aerospace Ltd
1270 Aberdeen St
Hawkesbury, ON K6A 1K7

Ph: 613 632-9577

Fax: 613 632-1053

Ph: 613 632-9577

Fax: 613 632-1053

Terms		Ship Via	
Quantity	Description		
	PLEASE REFERENCE THE PACK LIST NUMBER ON ALL CORRESPONDENCE TO THIS SHIPMENT. IF YOU HAVE ANY QUESTIONS, PLEASE CALL AT (613) 446-4544.		
8 ea	Part: 646.3310 Upper Cutter Hard Black Anodize per MIL-A-8625F, Type III, Class 2 Primer per MIL-PRF-23377K, Type I, Class N Job: 19598	Rev: N/C PO: PO35239	Line: 1
5 ea	Part: 647.4110 Doubler Hard Black Anodize per MIL-A-8625F, Type III, Class 2 Primer per MIL-PRF-23377K, Type I, Class N Job: 20238	Rev: N/C PO: PO35239	Line: 10
8 ea	Part: 647.4112 Clip Hard Black Anodize per MIL-A-8625F, Type III, Class 2 Primer per MIL-PRF-23377K, Type I, Class N Job: 20411	Rev: N/C PO: PO35239	Line: 11
8 ea	Part: 647.4113 Clip Hard Black Anodize per MIL-A-8625F, Type III, Class 2 Primer per MIL-PRF-23377K, Type I, Class N Job: 20458	Rev: N/C PO: PO35239	Line: 12
20 ea	Part: 650.9201 Eyelet Bracket Hard Black Anodize per MIL-A-8625F, Type III, Class 2 Primer per MIL-PRF-23377K, Type I, Class N Job: 20470	Rev: A PO: PO35239	Line: 13
20	Part: D2348	Rev: C	



A.T.G. INDUSTRIES INC.
731 INDUSTRIELLE STREET
ROCKLAND, ON K4K 1T2
Canada

Ph: (613) 446-4544

Fax: (613) 446-4556

Pack List

Number: 912955

Date: 21-Feb-17

To

Dart Aerospace Ltd
1270 Aberdeen St
Hawkesbury, ON K6A 1K7

Ship To

CHANTAL LAVOIE
Dart Aerospace Ltd
1270 Aberdeen St
Hawkesbury, ON K6A 1K7

Ph: 613 632-9577

Fax: 613 632-1053

Ph: 613 632-9577

Fax: 613 632-1053

Terms	Ship Via
Quantity	Description
	be subject to natural tarnishing and it is suggested that they be inspected within 24 hours of receipt.
	CERTIFICATE OF CONFORMANCE
	A.T.G. INDUSTRIES INC. CERTIFIES THAT ALL ITEMS IN THIS SHIPMENT CONFORM TO REQUIREMENTS.
	MADE IN CANADA.
	SP17-02-21
DAS 38 7-89	